April 18, 2012

Via Electronic Mail (rule-comments@sec.gov)

U.S. Securities and Exchange Commission
100 F Street, N.E.
Washington, DC 20549-1090
Attention: Elizabeth M. Murphy, Secretary

STATEMENT IN SUPPORT OF ACTION MADE BY DELEGATED AUTHORITY

Re: In re the Matter of The NASDAQ Stock Market LLC, Release No. 66667 (Mar. 28, 2012)

Dear Ms. Murphy:

The Securities Industry and Financial Markets Association ("SIFMA")[1] and NetCoalition[2] appreciate the opportunity to submit this statement in support of the action taken by the Securities and Exchange Commission (the "Commission") in disapproving, pursuant to Section 19(b)(2) of the Securities Exchange Act of 1934, as amended (the "Exchange Act"),[3] a rule change proposed by the Nasdaq Stock Market LLC ("Nasdaq" or the "Exchange") to discount its depth-of-book data products and provide an "enhanced" liquidity-provider rebate based upon the extent to which an Exchange member, in offering services to non-professional investors, consumes Exchange data and provides liquidity to the Exchange (the "Rule Change").[4]

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1 The Securities Industry and Financial Markets Association (SIFMA) brings together the shared interests of hundreds of securities firms, banks and asset managers. SIFMA's mission is to develop policies and practices that strengthen financial markets and encourage capital availability, job creation and economic growth while building trust and confidence in the financial industry. SIFMA, with offices in New York and Washington, D.C., is the U.S. regional member of the Global Financial Markets Association (GFMA).

2 NetCoalition is the public policy voice for some of the world's most innovative companies on the Internet. NetCoalition represents the interests of approximately 20 Internet companies or associations and is committed to building user confidence in the Internet through responsible market-drive policies, as well as to preserving an open and competitive Internet environment.

3 15 U.S.C. § 78s(b)(2).

4 *Self-Regulatory Organizations*; The *NASDAQ Stock Market LLC*; *Notice of Filing and Immediate Effectiveness of Proposed Rule Change to Reduce Market Data Fees and*

SIFMA and NetCoalition submit this statement to address certain arguments raised in Nasdaq's *Petition for Review of Order Disapproving Nasdaq's "Platform Pricing" Proposal*.[5] Several of these issues were addressed in our March 21, 2011 Comment Letter regarding the suspension of the Rule Change,[6] which we incorporate by reference herein. For the reasons set forth below, and because the Rule Change is inconsistent with the decision of the United States Court of Appeals for the District of Columbia Circuit in *NetCoalition v. Securities and Exchange Commission*,[7] we respectfully request that the Commission affirm its disapproval of the Rule Change.

I. The Dodd-Frank Act Does Not Immunize The Proposed Fees From Scrutiny.

As an initial matter, Nasdaq erroneously contends that the amendment to Section 19(b)(3)(A) of the Exchange Act in Section 916 of the Dodd-Frank Wall Street Reform and Consumer Protection Act of 2010 (the "Dodd-Frank Act")[8] reflects a presumption that all fees are constrained by competition and that the fees "should not be impaired by excessive regulatory scrutiny or rules."[9] Neither the plain language of the recent amendment to Section 19(b)(3)(A), nor the available legislative history of that amendment, supports the contention that the amendment reflects any such presumption. It is true that, as a result of the amendments, all SRO rule proposals establishing or changing dues, fees, or other charges are effective immediately upon filing regardless of whether such rule change is consistent with the provisions of the Exchange Act applicable to the Exchange. However, to protect against the evident risk of abuse, Section 916 also amended paragraph (C) of Section 19(b)(3) of the Exchange Act to provide an avenue and obligation for Commission review of the rule filing.[10]

The plain language of Section 19(b)(3)(A) does not refer to competitive forces in permitting rules imposing exchange fees to become effective upon filing with the Commission. Nasdaq does not cite to, and we are not aware of, any legislative history of the Dodd-Frank Act that suggests that proposed exchange rules establishing or changing fees may become effective immediately because such fees are deemed to be subject to competitive forces. The Dodd-Frank Act, moreover, did not amend Section 11A(c), which imposes on the Commission a duty to ensure that fees imposed by an SRO, such as

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Transaction Execution Fees for Retail Investors, Release No. 34-63745; File No. SR-NASDAQ-2011-10; 76 Fed. Reg. 4970 (2011).

5 *Petition for Review of Order Disapproving Nasdaq's "Platform Pricing" Proposal* at 6 (Oct. 4, 2011), available at http://www.sec.gov/rules/sro/nasdaq/2011/34-65362-petition.pdf ("Petition for Review").

6 Comment Letter of SIFMA and NetCoalition (March 21, 2011), available at http://www.sec.gov/comments/sr-nasdaq-2011-010/nasdaq2011010-3.pdf.

7 615 F.3d 525 (D.C. Cir. 2010).

8 Pub. L. No. 111-203, H.R. 4173, 124 Stat. 1376 (July 21, 2010).

9 *Pet. for Rev.* at 17.

10 15 U.S.C. § 78s(b)(3).

NYSE Area are, among other things, "fair and reasonable" and not "unreasonably discriminatory."[11] In short, Nasdaq's allegations concerning the effect of the Dodd-Frank Act amendment of Section 19(b)(3)(A) are unfounded.

II. Nasdaq's Argument That The Commission Failed To Act On The Proposed Rules Within The Deadline Established By The Dodd-Frank Act Is Erroneous

Nasdaq argues, remarkably, that action taken by the Commission's staff under lawfully delegated authority does not constitute action by the Commission and, therefore, the Commission did not disapprove the Rule Change within the deadline established for such action under the Dodd-Frank Act.[12] Nasdaq's argument is apparently that the staff disapproval did not constitute Commission action because there is a procedure to challenge staff action. That argument basically turns the Exchange Act on its head. For decades, the Commission's staff has taken action in the name and on behalf of the Commission. There is no indication that the Dodd-Frank Act was intended to disturb that pattern or cause the existence of an administrative remedy to invalidate action taken by delegated authority. It is rather remarkable for a self-regulatory organization that is heavily dependent on the Commission to advance the contrary position.

III. Nasdaq Has Not Shown That The Market Data Fees Are Constrained By Competitive Forces.

Nasdaq relies entirely on unsubstantiated and analytically flawed theory and speculation to support its contention that significant competitive forces constrain the pricing of its depth-of-book products. Nasdaq does not provide any evidence of the cost of collecting and distributing the market data, despite the D.C. Circuit's ruling in *NetCoalition* that the "costs of collecting and distributing market data can indicate whether an exchange is taking 'excessive profits' or subsidizing its service with another source of revenue."[13]

Conspicuously absent from the Petition for Review is Nasdaq's contention in the Rule Change that "the existence of alternative sources of information can be expected to constrain the prices platforms charge for market data."[14] Here, Nasdaq advances the conclusory "joint products" theory primarily to justify its fees for depth-of-book data, despite the fundamental errors in this theory and the lack of any evidence to support it. Moreover, this theory essentially eliminates any oversight function by the Commission of any fee charged by any exchange. Because the alleged constraints of "joint products" will *always* exist, acceptance of Nasdaq's argument means that *any* fee proposed by an exchange for the use of *any* of its facilities, whether market data or otherwise, will be deemed valid and not subject to challenge. The result would be a lack of any semblance of review by the Commission and an abdication of its supervisory role in assessing the fairness and reasonableness of an exchange's facility charges.

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11 15 U.S.C. § 78k-1(c).

12 *Pet. for Rev.* at 8-11.

13 *NetCoalition,* 615 F.3d at 537.

14 76 Fed. Reg. at 4977.

A. The Notice does not supply the cost data called for by the *NetCoalition* Court.

In *NetCoalition*, the Court observed that "in a competitive market, the price of a product is supposed to approach its marginal cost."[15] As a result, "the costs of collecting and distributing market data can indicate whether an exchange is taking 'excessive profits' or subsidizing its service with another source of revenue."[16] Despite *NetCoalition's* teachings, Nasdaq did not supply any cost data to the Commission, rendering the Commission unable to assess whether Nasdaq's fees are in fact constrained by competitive forces.

Nasdaq's principal response is to create a straw man. It claims that SIFMA and NetCoalition have argued that Nasdaq "ha[s] to price its market data at marginal cost."[17] We have done nothing of the sort. Rather, the point is that cost is relevant to determine whether competition constrains market-data fees. If prices substantially exceed costs, as we suspect is the case here, it is evidence that prices are above competitive levels. *See NetCoalition*, 615 F.3d at 537. Indeed, Nasdaq has conceded that its costs of collecting and disseminating market data approach zero.[18] The Commission, however, never requested such data, and Nasdaq never provided it.

B. The Exchange's "joint products" theory is conjectural and fundamentally flawed.

Nasdaq relies on the "joint products" theory to purport to explain why its fees are fair and reasonable. Under such a theory, an exchange could theoretically price its data fees higher and execution fees lower, or vice versa, but would be constrained by competitive forces from pricing those fees in the aggregate above the price of both products offered by other exchanges or trading venues.[19] This approach to pricing depth-of-book data is inherently flawed and cannot be the basis for the conclusion that the fees at issue are fair and reasonable.

Nasdaq cannot reconcile the "joint products" theory with the Exchange Act, which requires exclusive processors of market data to distribute the data they make available on "fair and reasonable terms."[20] Based on the "joint products" theory, exchanges could set *un*fair and

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15 *NetCoalition*, 615 F.3d at 537.

16 *Id.*

17 *Pet. for Rev.* at 6.

18 *See also* Comment Letter of Nasdaq Stock Market LLC at 16 (April 4, 2011) (conceding that the marginal cost of providing market data is "minimal or even zero"), available at http://www.sec.gov/comments/sr-nasdaq-2011-010/nasdaq2011010-4.pdf.

19 *See* 615 F.3d at 541 n.16; 76 Fed. Reg. at 4972.

20 15 U.S.C. § 78k-1(c)(1)(C). Nasdaq also cannot reconcile the aggregate cost structure for its depth-of-book data, which includes the cost of producing all of an exchange's products, with the *NetCoalition* decision, which made clear that the pricing and accompanying costs of *market data itself* is what is relevant, not some aggregation of market data with the costs of all of an exchange's other products and facilities. *See* 615 F.3d at 537 ("Thus, the costs of collecting and distributing *market data* can indicate whether an exchange is taking 'excessive profits' or subsidizing its service with another

*un*reasonable fees for market data, so long as they charged less for other services—even though some buyers of market data, such as NetCoalition's and SIFMA's members, do not consume other exchange services.

This remarkable approach, if accepted, would immunize from review supracompetitive data fees and is contrary to the requirements of the Exchange Act. It is also contrary to the *NetCoalition* court's conclusion that hidden cross-subsidies are evidence that the fair and reasonable standard in the Exchange Act has not been met: "[T]he costs of collecting and distributing market data can indicate whether an exchange is taking 'excessive profits' or subsidizing its service with another source of revenue, as the SEC has recognized."[21]

Nasdaq, in turn, argues that platform competition ensures that exchanges will price their market-data products at "fair and reasonable" levels.[22] According to Nasdaq, "robust competition between platforms for order flow and market data" (together) means that "the fees charged for either product in isolation reflect fair and reasonable market prices."[23] But, even if exchanges compete with each other based on the "total cost" of trading (*i.e.*, the price of both market data and trading services),[24] that says nothing about whether market-data fees by themselves are "fair and reasonable," as the Exchange Act requires.[25]

In any event, the "joint products" theory is flawed as a matter of economics and is not supported by any real-world evidence. Nasdaq does not dispute that market data and order execution compete in distinct markets where price is determined based on the competitive conditions in each market. Indeed, Nasdaq concedes that there is a "market for Nasdaq's depth-of-book products" separate from the market for order flow and argues there is "extensive evidence" showing competition in the market for market data.[26] Yet, Nasdaq also argues that "the price of market data cannot be evaluated independently of the price of providing liquidity."[27] Nasdaq

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source of revenue"); *id*. at 538 (noting "the risk that NYSE Arca could exercise market power appears to be elevated in the pricing of its *proprietary non-core data*").

21 *NetCoalition*, 615 F.3d at 537.

22 *Pet. for Rev.* at 12.

23 *Id.*

24 *Id.* at 6.

25 *See Response To Ordover And Bamberger's Statement Regarding Nasdaq's Proposed Rule Change Concerning The Pricing Of Depth-Of-Book Market Data* at 24-27 (March 21, 2011) ("*Response*") (attached hereto as Exhibit 1); *see also Gartenberg v. Merrill Lynch Asset Mgmt., Inc*., 694 F.2d 923, 929 (2d Cir. 1982) ("Competition between money market funds for shareholder business does not support an inference that competition must therefore also exist between adviser-managers for fund business. The former may be vigorous even though the latter is virtually non-existent. Each is governed by different forces.").

26 *Pet. for Rev.* at 5, 7, 18.

27 *Id.* at 14.

cannot have it both ways—either market data is part of a joint product sold in a "platform" market, or it is not.[28]

There can be no question that market data and order execution are two distinct products offered by exchanges. They are bought and sold separately, sometimes by different consumers.[29] The price of each is the result of the distinct competitive conditions confronting each product, and competition for one does not constrain the pricing of the other.[30]

C. The Rule Change cannot be sustained based on the theory that order flow constrains the price of market data.

NetCoalition squarely rejected Nasdaq's argument[31] that competition for order flow and trade executions provides an effective constraint on the fees an exchange can charge for its non-core market data.[32] Nasdaq supplies no new evidence warranting reconsideration of that sound conclusion.

D. Nasdaq does not support its contention that there is competition in the market for market data.

Continuing its flawed argument that there is both competition for "joint products" that constrains the aggregate price an exchange can charge for the entire range of products and services it offers *and* competition in the market for market data that constrains the prices Nasdaq can charge for market data it makes available, Nasdaq argues that it has submitted "extensive evidence" of "intense" competition in the market for market data.[33] The "evidence" which Nasdaq cites does not demonstrate that competition constrains the price of the depth-of-book data that Nasdaq makes available.

First, Nasdaq points to supposed "substantial turnover in customers of Nasdaq's depth-of-book products."[34] But Nasdaq focuses solely on those clients that purchase depth-of-book data for internal purposes, while providing no information about who these customers are, why they may

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28 If it is the case that the pricing of each joint product—order flow and market data—is constrained by market forces within each respective market, *see* 76 Fed. Reg. at 4973, 4977, it is unlikely that we would see other platforms charging such divergent prices for what the Exchange argues are similar products. Instead, such divergent pricing demonstrates that each exchange has market power and may try different pricing models without fear of a competitive response from other exchanges.

29 *Response* at 24-25.

30 *Id.*

31 *See Pet. for Rev.* at 5, 16.

32 *See NetCoalition*, 615 F.3d at 541.

33 *Pet. for Rev.* at 16.

34 *Id.*

have stopped (or started) using Nasdaq's depth-of-book data, or anything else about them.[35] And Nasdaq ignores entirely the investors who receive depth-of-book data from retail providers.

Second, Nasdaq argues that "variation in subscription levels among users of Nasdaq's data"—*i.e.*, Tape C is more expensive than Tape A/B but has a greater subscription rate—is evidence that consumers "are not required to purchase Nasdaq data—as one might expect if Nasdaq were a monopolist."[36] Putting aside the flawed assumption that a firm cannot be a monopolist in products that are optional, that more customers subscribe to Tape C despite its higher price demonstrates only that investors do not view Tape A/B as a substitute for Tape C and that there is higher demand for Tape C than for Tape A/B. It does not speak to whether competition constrains the price of depth-of-book data that Nasdaq makes available.

Third, Nasdaq points to a supposed increase in customers after it reduced the price of its TotalView depth-of-book product from $150 to $70 per month per subscriber (for professional investors) in 2003.[37] This nearly decade-old information tells us little more than that there was higher demand for Nasdaq's TotalView product at $70 per month than there was at $150 per month. This is hardly surprising given the 53% discount, and says nothing about whether $70 per month is a competitive price for TotalView data. All things being equal, demand will increase when price decreases, which is why the preferred test for market power is whether customers will switch to an alternative product in response to a "small but significant non-transitory increase in price."[38] Nasdaq does not provide this information nor, we suspect, could it have done so.

IV. The Proposed Rule Change Unfairly Discriminates Against Certain Users And Is A Burden On Competition.

SIFMA and NetCoalition agree with the Commission that Nasdaq's proposal would be detrimental to other exchanges and be a burden on competition. Similarly, SIFMA and NetCoalition believe that because the discounts proposed by Nasdaq are unavailable to firms that service professional investors or those entities that serve retail investors and purchase depth-of-book data but do not provide order-execution services, Nasdaq proposal contravenes the Exchange Act and the rules promulgated thereunder.[39] As such, the Commission should uphold the disapproval of the Rule Change by delegated authority.

We support the Commission's effort to prevent a dominant exchange from using its market power to abuse other exchanges and burden competition. At the same time, we note the Commission's unwillingness in other contexts (as exemplified in *NetCoalition)* to extend the

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35 *Id.*

36 *Id.* at 17.

37 *Id.* Subscriptions supposedly increased from 1,345 professional subscribers August 2003 to 6,767 in January 2004.

38 *NetCoalition*, 615 F.3d at 542; *see also* FTC, *Horizontal Merger Guidelines* 4–6 (Aug. 19, 2010).

39 *See* 15 U.S.C. § 78K-1(c)(1)(D); 15 U.S.C. § 78f(b)(5); 17 C.F.R. 242.603(a)(2).

same protection to investors, market professionals, and data vendors by curbing the tendency of exchanges to exploit and abuse their power as data monopolists. The Congress intended to protect them as well from unfair and unreasonable market data prices and other similar abuses by the exchanges.

V. Nasdaq Erroneously Cites Theory and Conjecture as "Evidence"

As the Commission is aware, Section 25(a)(4) of the Exchange Act provides that, in an appeal to a United States Court of Appeals challenging a Commission order, the Commission's findings of fact are conclusive if supported by substantial evidence. In *NetCoalition*, the D.C. Circuit vacated the Commission's order under review because, *inter alia*, its findings of fact were not supported by substantial evidence.[40] The Court pointed out that conclusory opinions, statements and theories advanced by the exchanges do not constitute evidence, let alone substantial evidence:

> Granted, the record includes statements from NYSE Arca and other exchanges to support the conclusion. *E.g.*, Order, 73 Fed. Reg. at 74,784 ("NYSE Arca, in setting the fee, acknowledged that it needed to balance its desire for market data revenues with the potential damage that a high fee would do to its ability to attract order flow."). The self-serving views of the regulated entities, however, provide little support to establish that significant competitive forces affect their pricing decisions. Nor does the remaining evidence provide substantial support. For example, the SEC quoted the 2001 Advisory Committee Report's statement that 'a market's inability to widely disseminate its prices undoubtedly will adversely impact its ability to attract limit orders and, ultimately, all order flow.' *Id.* at 74,783 n.216 (quoting Advisory Committee Report § B.1). But this was a conclusion, not evidence.[41]

The Court's characterization of that "evidence" is apt here. Nasdaq attempts to help itself by characterizing much of the views and arguments it presents as "evidence" of something or other.[42] But no amount of theorizing or arguing constitutes "evidence" and Nasdaq's efforts to change that plain fact are unavailing. Nasdaq does cite in its Petition for Review various facts and figures but, alone or together, they do not demonstrate that the fees and discounts in question are fair or reasonable, which the Exchange Act requires. Nor could they, as discussed above, in the absence of data showing Nasdaq's costs in collecting and disseminating the data.

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40 *NetCoalition*, 615 F.3d at 542-44.

41 *NetCoalition*, 615 F.3d at 541 & n.15.

42 *See, e.g.*, *Pet. for Rev.* at 5 (views of antitrust authorities), 14-15 (platform theory), and 22 (competition in the markets for market data and execution services).

VI. Conclusion

For the reasons set forth above, and given the absence of any cost data or other evidence supporting the Exchange's contention that the proposed data fees are constrained by competitive forces, we respectfully request that the Commission affirm its staff's disapproval of the Rule Change.

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If you have any questions or you would like to discuss these matters further, please call Melissa MacGregor, Managing Director and Associate General Counsel at SIFMA at 202-962-7385.

Respectfully submitted,

Ira D. Hammerman
Senior Managing Director & General Counsel
SIFMA

Markham Erickson
Executive Director & General Counsel
NetCoalition

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EXHIBIT 1

RESPONSE TO ORDOVER AND BAMBERGER'S STATEMENT REGARDING NASDAQ'S PROPOSED RULE CHANGE CONCERNING THE PRICING OF DEPTH-OF-BOOK MARKET DATA

Dr. David S. Evans

Global Economics Group, LLC
Chairman

University of Chicago Law School
Lecturer

University College London
Executive Director, Jevons Institute for Competition Law and Economics
Visiting Professor

March 21, 2011

I. INTRODUCTION

Nasdaq Stock Market, LLC ("Nasdaq") has requested that the Securities and Exchange Commission ("SEC") approve a proposed rule change (the "Proposal") concerning the fees it charges for its depth-of-book market data (also known as unconsolidated, or non-core, data). Specifically, Nasdaq proposed to provide a discount on the fees it charges its "non-professional" users for depth-of-book data products if they provide order flow above certain specified thresholds. Through this pricing structure, Nasdaq would bundle its depth-of-book data with its trade-execution services.

It is my understanding that it is Nasdaq's burden, as an "exclusive processor" of market data, to establish that fees for its depth-of-book data are "fair and reasonable" and "not unreasonably discriminatory."[1] I also understand that the SEC has adopted a "market-based" approach for evaluating whether depth-of-book data fees are "fair and reasonable" and that this approach was the subject of a decision last year by the United States Court of Appeals for the D.C. Circuit in *NetCoalition v. Securities and Exchange Commission* (the "*NetCoalition* Decision").[2]

This Response examines the conclusions set forth in the Statement from Janusz Ordover and Gustavo Bamberger, on which Nasdaq relies to argue that the fees it seeks to charge are constrained by competitive forces and thus "fair and reasonable."[3] Ordover and Bamberger claim that *any* price that Nasdaq, in its sole

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[1] *See* 15 U.S.C. § 78k-1(c)(1)(C)-(D); 17 C.F.R. § 242.603(a).
[2] 615 F.3d 525 (D.C. Cir. 2010).
[3] Statement of Janusz Ordover and Gustavo Bamberger (December 29, 2010) [hereinafter "Statement"].

discretion, seeks to charge for market data is constrained by significant competitive forces because Nasdaq confronts "platform competition."[4] Based on that premise, Ordover and Bamberger conclude that Nasdaq may charge high prices for market data – no matter how high those prices might be – because they supposedly are offset by relatively low prices for transaction services.[5] Indeed, Ordover and Bamberger state that "there is no need to regulate the pricing of proprietary data" given the "platform" competition on which they rely.[6] But that is contrary to what I understand to be the SEC's statutory mandate, which places special emphasis on the widespread availability of data and recognizes the value of these data for efficient financial markets.[7] As a result, Ordover and Bamberger's opinions are not relevant to the legal and regulatory context in which U.S. exchanges must operate.

Putting aside that Ordover and Bamberger's opinions are irrelevant, those conclusions are also not supported by the economics or evidence. According to

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[4] In the context of addressing Nasdaq's Proposal, I discuss whether Nasdaq's depth-of-book data prices are constrained by significant competitive forces within what I understand to be the regulatory framework for the SEC's assessment of the pricing of depth-of-book data. This is based on the SEC's "market-based" approach in NYSE Arca for assessing whether depth-of-book data fees are equitable, fair and reasonable; Nasdaq and Ordover and Bamberger are taking the same approach in connection with Nasdaq's Proposal. The SEC noted in NYSE Arca that "reliance on competitive forces is the most appropriate and effective means to assess whether terms for the distribution of non-core data are equitable, fair and reasonable, and not unreasonably discriminatory." *See* Order Setting Aside Action by Delegated Authority and Approving Proposed Rule Change Relating to NYSE Arca Data, SEC Release No. 34-59039, 73 Fed. Reg. 74770 (December 2, 2008) [hereinafter, "NYSE Arca Order"], at 74781. I understand that the SEC's regulatory mandate would not permit it to find that high depth-of-book data fees are fair and reasonable because they may be offset by low prices for transaction services.

[5] *See* Statement, *supra* note 3, ¶¶ 5-6, 23.

[6] *See* Statement, *supra* note 3, ¶ 5; *see also* ¶ 6 ("Regulatory forbearance is thus fully warranted in the absence of any showing that the pricing strategies will anti-competitively disadvantage rival platforms and some well-defined customer groups of the investing public.").

[7] The statute is consistent with the view that exchange-related data provide positive externalities for the financial markets, and that making these data widely available at fair and reasonable prices helps make financial markets more efficient. Individual producers of these data do not take these externalities into account in their pricing decisions.

Ordover and Bamberger, Nasdaq's depth-of-book data fees are constrained by competitive forces in three ways. First, Ordover and Bamberger claim that "the existence of alternative sources of information can be expected to constrain the prices platforms charge for market data."[8] Second, they claim that order flow competition constrains depth-of-book data prices because "a platform can be expected to use its market data product as a tool for attracting liquidity and trading to its exchange."[9] Third, in a restatement of the order-flow-competition argument, they assert that trading services and depth-of-book data are "joint products" the "total" price of which is constrained by the "total price of trading on rival platforms."[10]

Ordover and Bamberger made similar arguments in the context of the application by NYSE Arca to charge certain fees for its depth-of-data products that is the subject of the *NetCoalition* decision.[11] In that matter, I submitted two reports addressing those arguments, which I attach hereto as Exhibits A and B for the SEC's convenience.[12] As explained previously, and as I will explain below, Ordover and Bamberger's conclusions are wrong and the authors provide no meaningful factual support for any of them.

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[8] *See* Statement, *supra* note 3, ¶ 40.

[9] *See* Statement, *supra* note 3, ¶ 67.

[10] *See* Statement, *supra* note 3, ¶¶ 19, 38

[11] In the NYSE Arca matter, the SEC did not rely upon Ordover and Bamberger's reasoning in approving NYSE Arca's fees and the D.C. Circuit did not address their arguments on appeal. *See NetCoalition*, 615 F.3d at 542 n.16 (stating that the "total platform" theory "is not the theory of competition on which the SEC relied [in approving NYSE Arca's proposed fees] and it may not press it for the first time on appeal.").

[12] Dr. David S. Evans, An Economic Assessment of Whether "Significant Competitive Forces" Constrain an Exchange's Pricing of Its Depth-of-Book Market Data (July 10, 2008) [hereinafter "Evans First NYSE Arca Report"]; Dr. David S. Evans, Response to Ordover And Bamberger's Statement Regarding the SEC's Proposed Order Concerning the Pricing of Depth-Of-Book Market Data (October 10, 2008) [hereinafter, "Evans Second NYSE Arca Report"].

This Response is organized as follows. Section II provides relevant industry background and explains the fundamental characteristics of depth-of-book data, how they are used by traders, and how they are priced and sold.

Section III addresses Ordover and Bamberger's unsupported assertion that alternative sources of depth-of-book data act as a significant competitive constraint on the prices that a given exchange can charge for its depth-of-book data. Ordover and Bamberger have not undertaken any analysis to show that this is the case. Nor could they make such a showing because each exchange's depth-of-book data are unique to that exchange and traders must purchase such data from all exchanges with significant depth-of-book liquidity to know how much liquidity is available at what prices and where.

In Section IV, I show that Ordover and Bamberger's claim that competition for order flow acts as a significant competitive constraint on an exchange's pricing of its depth-of-book data is analytically flawed and factually inconsistent with how exchanges work. Depth-of-book data prices do not affect the marginal incentive to place orders and, therefore, do not significantly affect order-flow decisions. On the other hand, depth-of-book data revenue can be used to offset the costs of liquidity rebates and discounts that attract more order flow – as Nasdaq is now admittedly trying to do.

Finally, in Section V, I show that Ordover and Bamberger's "total return" analysis does not address the question of whether depth-of-book data fees are competitively constrained. Where two "joint products" of the same facility are sold as separate products and, there are limited substitutes for one of the products,

competition between the producers of the joint product (what Ordover and Bamberger call "platform competition") will not prevent the exercise of market power for that product.

II. INDUSTRY BACKGROUND

A. Importance of Depth-of-Book Data Following Decimalization

Nasdaq's Proposal concerns the prices of Nasdaq's depth-of-book data. Depth-of-book data consist of information regarding limit orders to buy stock at prices lower than, or to sell stock at prices higher than, the best prices on each exchange.[13] That is, depth-of-book data provide information on prices "below" the "top of the book" and the number of shares being offered at those prices. Top-of-book data, by contrast, provide information on the best prices available on each exchange and the number of shares being offered at those prices.[14]

The importance of depth-of-book data has increased significantly since the transition to "decimalization." Prior to decimalization, stock prices were measured in 1/16ths of a dollar, or 6.25 cents (and 1/8ths of a dollar before that). Starting in 2001, stock prices on U.S. exchanges were "decimalized," or quoted in one-cent increments. One of the main potential benefits of decimalization was the possibility of decreased spreads between the best bid and offer for a given security. On the other

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[13] NYSE Arca Order, *supra* note 4, at 74780.

[14] The SEC requires each exchange to report top-of-book data for each security, as well as data on the last sale of each security, to a central data processor, which then consolidates the data and disseminates it to market participants. The consolidated "core" data consist of (1) last sale reports on each security, (2) the current best bid and offer (price and number of shares available) for each security on each exchange, and (3) national best bid and offer across exchanges. *See NetCoalition*, 615 F.3d at 529.

hand, decimalization also resulted in a decrease in the number of shares offered for trading at the top of the book.

To take a simple example, prior to decimalization, a given stock could have been quoted at $19.9375 ($19 and 15/16ths), $20.00 or $20.0625 ($20 and 1/16ths). If traders wishing to buy that stock chose to offer the closest price point to their target prices, then all buy orders with a target price between $19.97 and $20.03 would be priced at $20.00.[15] And if no buyers had a target price at or above $20.03, then the top of the book for buy orders would be at $20.00 and would consist of all orders with a target price between $19.97 and $20.03.

With decimalization, the same stock could be quoted at $19.97, $19.98, $19.99, $20.00, $20.01, $20.02, and $20.03. The buy orders that would have been offered at the $20.00 price point prior to decimalization are spread among the seven price points between $19.97 and $20.03 after decimalization. If the highest target price among buyers is, for example, at $20.03, then the top of the book would be at $20.03 and would consist only of orders with target prices between $20.025 and $20.035. Prior to decimalization, orders with target prices between $19.97 and $20.025 would have been at the top of the book and would have been included in the consolidated tape data. With decimalization, these orders would instead be below the top of the book and included only in depth-of-book data.

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[15] Traders will not necessarily follow this strategy of choosing the closest price point to their target prices, and other factors associated with a transition to decimalization (such as a decrease in the bid-ask spread) would also affect trading decisions, but the example given is illustrative of the likely decrease in liquidity available at the top of the book. In addition, I note that the range of $19.97 to $20.03 given in the text is approximate; the exact range, $19.96875 to $20.03125, is slightly larger.

Decimalization therefore led to a significant decrease in the number of shares available for trading at the top of the book and correspondingly increased the importance of shares available for trading below the top of the book.[16] This change meant that larger orders were less likely to be filled at the top-of-book price and increased the value of depth-of-book data, which provide important information on the likely range of prices at which large orders may be filled.[17]

B. Importance of Depth-of-Book Data from Different Exchanges

Each exchange's depth-of-book data reflect the limit orders placed on that exchange, which differ materially from the limit orders placed on other exchanges. That is because different traders place different orders on different exchanges. Depth-of-book data from Nasdaq, for example, generally reflect different limit orders from depth-of-book data from NYSE or Direct Edge. If a trader placed each order on all available exchanges, it would risk having the same order filled on multiple exchanges, which could be a costly result. The depth-of-book data from one exchange therefore differs materially from the depth-of-book data from other exchanges.

To have a reasonably comprehensive view of liquidity below the top of the book, depth-of-book data from all exchanges with substantial depth-of-book liquidity are required. There are two main reasons for that fact.

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[16] *See NetCoalition*, 615 F.3d at 530, n. 7; NYSE Arca Order at 74780.

[17] *NetCoalition*, 615 F.3d at 530, n. 7; NYSE Arca Order at 74780 ("With the initiation of decimal trading in 2001, however, the value to market participants of non-core data, particularly depth-of-book order data, increased").

First, depth-of-book data from all exchanges with significant liquidity for a given security are important in making trading decisions for that security. Regulation NMS provides "trade-through protection" to the displayed "top-of-book" quotations.[18] A "trade-through" occurs when trades in one market center are executed at prices inferior to those another market center is offering at the same time. By offering trade-through protection, Regulation NMS protects the trader against choosing to execute a trade on an exchange with less favorable terms and guarantees execution at the best price available at the top of the book.

By contrast, no trade-through protection is afforded to quotations below the top of the book. Rather, for traders to identify the exchange on which the optimal price and volume are offered for a given security, and for an assessment of the likely price of a significant order, my understanding is that they must purchase and review the depth-of-book data from each trading venue with significant liquidity for that security. In the absence of such data, for the many orders that are unlikely to be filled at the top of the book, they might miss an opportunity to route an order at lower cost and/or have a more accurate estimate of the likely price of the order.

The Security Traders Association ("STA") has confirmed this marketplace reality. According to the STA, a broker-dealer needs the depth-of-book data from each significant venue on which a given security trades for a useful perspective of available liquidity:

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[18] Effective on August 29, 2005, SEC adopted Regulation NMS, which contains four interrelated proposals. The "Order Protection Rule" or so-called "Trade-Through Rule", as one of the four proposals, requires trading centers to obtain the best price for investors when such price is represented by automated quotations that are immediately accessible. *See* http://www.sec.gov/rules/final/34-51808.pdf .

> We do not believe that the depth-of-book feeds from the various exchanges are fungible. Depth-of-book feeds are not substitutes for one another: NASDAQ's depth-of-book data for IBM will be different from the NYSE depth-of-book data for IBM. On the contrary, each depth-of-book data feed reflects the market conditions for a particular security on that particular venue. For a full appreciation of the liquidity available in the entire marketplace . . . as a commercial and competitive matter, a broker-dealer needs the depth-of-book feeds from each significant venue on which the security trades.[19]

The consequences of a trader's not purchasing the depth-of-book data for a major center of liquidity, such as Nasdaq, can be substantial. A broker-dealer without depth-of-book data from Nasdaq will have a materially incomplete view of the available volume and prices in a given security. The availability of NYSE volumes and prices for that security is in no meaningful sense a substitute for the different Nasdaq volume and prices.

Indeed, the broker-dealer that forgoes Nasdaq depth-of-book data could have significantly higher costs of trading and may fail to make profitable trades it would otherwise make because it did not know about available liquidity on Nasdaq. Such traders would face significant competitive pressure from other traders that did purchase the Nasdaq depth-of-book data and demonstrate substantially superior results.

Simply put, a broker-dealer cannot ignore the depth-of-book data available from the leading trading venues. And, as Ordover and Bamberger acknowledge, "all

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[19] Bart M. Green & John Giesea, STA Comment Letter at 3 (Sept. 11, 2008), http://www.sec.gov/comments/34-57917/3457917-15.pdf [hereinafter "STA Comment Letter"].

else equal, the deeper is the 'depth-of-book' information on an exchange, the more valuable it is."[20]

The second reason that traders value depth-of-book data from each exchange with significant depth-of-book liquidity is that exchanges vary in the available liquidity for different securities and thus in the ability of traders to actually consummate trades on those exchanges. Securities for which Nasdaq is the primary center of liquidity will differ from those for which NYSE or NYSE Arca is the primary center of liquidity. For example, in October 2010, for Tape A securities (for which NYSE is the initial listing exchange), NYSE had about 1.9 times the volume of trading that Nasdaq did, and NYSE and NYSE Arca combined had about 2.9 times the volume of trading that Nasdaq did.[21] Similarly, for Tape C securities (for which Nasdaq is the initial listing exchange), Nasdaq had about 2.2 times the volume of trading that NYSE Arca did. For many individual securities, the differences would be even greater. This reinforces the fact that an asset manager seeking broad diversification in its equity portfolio cannot ignore either NYSE or Nasdaq or assume data from one exchange is a substitute for data from the other.

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[20] Statement, *supra* note 3, ¶ 16.

[21] The statistics reported are for the same time period (October 2010) and using the same data source (BATS) as relied on by Ordover and Bamberger. *See* Statement, *supra* note 3, ¶ 12, n. 4; at http://www.batstrading.com/market_summary. For the purpose of analyzing competition among exchanges, all exchanges owned by the same corporate parent should be aggregated because they are controlled by the same economic agent, which seeks to maximize the profits of the combined operations. Thus, for purposes of economic analysis, NYSE and NYSE Arca should be considered a single entity. Ordover and Bamberger also report statistics for NYSE and NYSE Arca combined. I have also reported the comparison of trading on NYSE (exclusive of NYSE Arca) to trading on Nasdaq. The relative proportions of trading volume are informative of the relative importance of depth-of-book data from the respective exchanges even though shares of depth-of-book data may differ from shares of trading volume. *See* NYSE Arca Order, supra note 3, at 74784 ("A market participant is likely to be more interested in other exchange and ECN products when the exchange selling its data has a small share of trading volume, because the depth-of-book order data provided by other exchanges and ECNs will be proportionally more important in assessing market depth").

A trader's need for information about a particular security can be satisfied only by data about that particular security. The depth-of-book data on trading in Microsoft are distinct from the depth-of-book data on trading in WalMart. A trader interested in trading Microsoft stock, perhaps because the trader believes that Microsoft will be highly successful in mobile phones, needs data on Microsoft liquidity and therefore needs depth-of-book data from the exchanges that have substantial liquidity in Microsoft stock. Data on liquidity for WalMart, or for that matter most other stocks, from one exchange would not be a significant substitute for data on liquidity for Microsoft on another exchange.

C. Pricing of Depth-of Book Data

Depth-of-book data are sold in monthly subscriptions and are typically based on a fixed monthly fee per device.[22] That fixed subscription fee is independent of the volume of orders generated by the subscriber.[23] The fixed fee is also independent of the extent to which customers use the data. Each monthly subscription provides data on all securities traded on an exchange, and customers are charged the same price whether or not they examine the depth-of-book data for one security, all securities, or some number in between.

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[22] In addition, there may be a cap imposed by the exchange on the total monthly data fees paid by each company for certain types of fees. There may also be per-company fees for access to the datafeeds from the exchange's servers. *See* Filing of Proposed Rule Change Relating to Approval of Market Data Fees for NYSE Arca Data, SEC Release No. 34-53592, 71 Fed. Reg. 33496 at 33496-33497(June 9, 2006).

[23] As I discuss below in Section IV.C, Nasdaq's proposed discount schedule, which would provide for higher discounts on non-professional depth-of-book data fees and trading fees for firms that place orders above certain specified thresholds on Nasdaq, does not result in order-flow competition providing a significant competitive constraint on depth-of-book data fees.

An increase or decrease in the monthly subscription fee for depth-of-book data does not therefore change a trader's marginal cost to purchase or sell a particular security on a particular exchange. That is, in choosing where to place the next trade, an entity would not consider the cost of the subscription fee. Likewise, in setting the depth-of-book monthly subscription fee, the exchange would consider the effect of that fee on the marginal incentive to subscribe to depth-of-book data, but not on the marginal incentive to trade generally or for a particular security.[24]

III. PRICES FOR DEPTH-OF-BOOK DATA FROM ONE EXCHANGE ARE NOT SIGNIFICANTLY CONSTRAINED BY THE AVAILABILITY OF DEPTH-OF-BOOK DATA FROM OTHER EXCHANGES.

According to Ordover and Bamberger, "the existence of alternative sources of information can be expected to constrain the prices platforms charge for market data."[25] Ordover and Bamberger provide no factual support for that assertion, and it is contrary to what happens in the marketplace.

For the reasons discussed above, depth-of-book data from exchanges with substantial liquidity – which obviously includes Nasdaq – are essential information for those traders who buy them. Each is a component of the fixed-cost base of trading data that must be purchased and aggregated.

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[24] My position here and in my prior Reports does not assume that there is no relationship whatsoever between the pricing of depth-of-book data and the volume of order flow. Some traders may decide not to use a trading venue that declines to make depth-of-book data available at all or charges an extremely high price for that data. However, the fixed fees paid for depth-of-book data pricing will not affect the traders' marginal incentives as to where to place their next buy or sell order since the cost of that trade is not affected at all by the decision to use or not use depth-of-book data that the trader has already purchased.

[25] *See* Statement, *supra* note 3, ¶ 67.

To have a reasonably comprehensive view of liquidity below the top of the book, depth-of-book data from all exchanges with substantial depth-of-book liquidity are required. Indeed, for traders to identify the exchange that is the optimal exchange on which to place a large trade, they must purchase and review the depth-of-book data of each center of significant liquidity. Otherwise, they will have a significantly incomplete view of the liquidity for that particular security and might miss the opportunity to execute a trade for that security at a superior price.

Even when other exchanges have some depth-of-book liquidity for a particular security, traders value the liquidity and pricing information available on Nasdaq. Significantly, traders cannot purchase depth-of-book data from Nasdaq just for those securities for which other exchanges have limited liquidity. Nasdaq (and other exchanges) offer their depth-of-book data on an all-or-nothing basis, not by security.

In short, a broker-dealer cannot ignore the depth-of-book data available from a major trading venue, such as Nasdaq. The existence of depth-of-book data from other exchanges does not therefore significantly constrain Nasdaq's pricing of its own depth-of-book data.

IV. COMPETITION FOR ORDER FLOW DOES NOT SIGNIFICANTLY CONSTRAIN DEPTH-OF-BOOK DATA PRICING.

In this section, I address Ordover and Bamberger's conclusion that competition for order flow constrains the pricing of Nasdaq's depth-of-book data. According to Ordover and Bamberger, that is the case because "a trading platform cannot generate market information unless it receives trade orders," suggesting that a

strong and direct relationship exists between order-flow competition and market data prices.[26] "For this reason," Ordover and Bamberger claim, "a platform can be expected to use its market data product as a tool for attracting liquidity and trading to its exchange," thereby constraining market data prices.[27] That assertion is unsupported and wrong.

A. The Relationship Between Order Flow Competition And the Price of Depth-of-Book Data Is Neither Strong Nor Direct.

The premise of Ordover and Bamberger's argument is that order flow and depth-of-book data are directly and inextricably linked because "a trading platform cannot generate market information unless it receives trade orders."[28] That assertion distorts the relationship between the two.

An exchange has at least three sources of revenue relevant to the Proposal: liquidity providers, liquidity takers, and depth-of-book market data purchasers. The provision and taking of liquidity generates order flow and constitutes the trading process. Market data are a byproduct of the trading process.

A strong and direct relationship exists between order flow and prices for liquidity providers and liquidity takers. Liquidity providers are given rebates and other incentives to provide liquidity to the exchanges; those price incentives directly affect the marginal revenue of providing liquidity, and, consequently, the volume of liquidity provided. Liquidity takers are charged for using this liquidity; those fees

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[26] Statement, *supra* note 3, ¶ 67.
[27] Statement, *supra* note 3, ¶ 67.
[28] Statement, *supra* note 3, ¶ 67.

directly affect the marginal cost of taking liquidity and, consequently, the volume of liquidity taken.

Trading venues compete to attract liquidity, which generates trading volume, which in turn generates trading revenues for the platform. Each trade is executed with respect to an individual security, and exchanges charge fees (with separate discounts and rebates for trade-execution services) that are determined on a transactional basis and are designed specifically to affect trading incentives and attract liquidity. Those transaction-based fees for order flow allow traders to assess the costs and benefits of placing a given trade for a given security on a given venue and thus affect traders' marginal incentives to direct order flow among exchanges. Accordingly, the prices that are relevant to attracting order flow (aside from the prices of securities that are purchased or sold) are the transaction fees, including the liquidity rebates, associated with placing orders on a trading venue.[29]

There is not a similar strong or direct relationship between order flow and the price of depth-of-book data. Consider a trader who has purchased monthly subscriptions to the depth-of-book data of the significant exchanges. As I pointed out above, depth-of-book data are sold as monthly subscriptions and are typically based,

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[29] Nasdaq also claims that it "believes that non-professional users that are able to make use of depth data also have a degree of knowledge about market structure that would cause them to favor limit orders, rather than market orders, when buying and selling. Thus, through the proposal, NASDAQ hopes to encourage a 'virtuous circle' in which firms route more liquidity-providing orders to NASDAQ and consume and distribute more data in order to receive the discount, with increased data distribution in turn encouraging still more liquidity provision." *See* Notice of Filing and Immediate Effectiveness of Proposed Rule Change To Link Market Data Fees and Transaction Execution Fees, SEC Release No. 34–63745, 76 Fed. Reg. 4970 at 4971 (January 20, 2011) [hereinafter "Proposed Rule Change"]. The "virtuous circle" claim is not analyzed by Ordover and Bamberger and is otherwise not supported by Nasdaq. I understand that non-professional users do not generally choose which trading venues to direct their limit orders. There will therefore be no direct impact on orders placed on Nasdaq (the claimed "virtuous circle") from decisions made by non-professional users even if the greater consumption of depth-of-book data posited by Nasdaq takes place.

at least in part, on a monthly fee per device and include all securities on the exchange. As a result, the prices that the trader pays for placing an order on an exchange in a particular stock depends only on the prices that the exchange charges for orders and does not depend on the monthly subscription price. Moreover, when the trader made the decision to purchase depth-of-book data for the major exchanges, the trader did not know which exchange that data would later show to be the best trading venue having the best prices and liquidity for that stock. Whether the monthly subscription price is high or low does not affect, in any way, the decision on where to place an order.[30]

Consequently, the availability of depth-of-book data do not directly lead to order flow because that depends mainly on what liquidity has been placed on the several exchanges that traders can consider and because the price of orders is independent of the monthly subscription price. An increase or decrease in the monthly subscription fee for depth-of-book data would not change a trader's marginal cost of buying or selling a particular security on a particular exchange. That is, in choosing where to place the next trade, a trader would not consider the cost of the subscription fee, which has already been incurred and is a fixed amount that does not vary with trading activity. Contrary to Ordover and Bamberger's suggestion, the exchanges do not use depth-of-book data to stimulate trades, as they use rebates and fees for liquidity providers and takers.

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[30] There is a very weak relationship between the monthly subscription price and orders. If an exchange sets the monthly subscription price so high that few traders purchase it, then the number of traders placing orders on that exchange for any stock would likely be reduced. One of the costs of setting the subscription price too high is then the loss of order flow revenue. *See also, supra* note 24.

If anything, the fact that market data is a byproduct of order flow suggests that competition for order flow provides an incentive to increase the price of the depth of book data. Lower order flow prices generally will increase order flow, which, in turn, will increase the value of depth-of-book data. That is, by attracting additional order flow, an exchange will not only gain the transaction fees associated with the order flow, but it will also increase the amount it can charge for its depth-of-book data.

Increased depth-of-book revenue can be used to offset the costs of liquidity rebates and discounts that attract order flow. Indeed, the Securities Trading Association observes that "raising the market data fees would enable [the exchanges] to pay higher rebates and thus, attract more order flow."[31] We see that observation empirically verified in the case of consolidated tape data. Trading venues use revenue from consolidated tape data to compete for order flow. As Nasdaq states: "Participants in the UTP [consolidated tape] Plan have used tape fee revenues to establish payment for order flow arrangements with their members and customers."[32]

The profit-maximizing strategy for exchanges, absent any regulatory requirements, would be to set lower prices for order flow, which would have the effect of increasing the value of, and the prices the exchanges can charge for, their depth-of-book data.

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[31] STA Comment Letter, *supra* note 19, at 3.

[32] Nasdaq Stock Market, Inc., Annual Report (Form 10-K), at 17 (Feb. 25, 2008).

B. Ordover and Bamberger's Conclusion That Order-Flow Competition Significantly Constrains Depth-of-Book Data Pricing Is Wrong.

Based on the premise that market data would not exist without order flow, Ordover and Bamberger jump to the conclusion that competition for order flow is a significant competitive constraint because "a platform can be expected to use its market data as a tool for attracting liquidity and trading to its exchange."[33] That is wrong.

Although an exchange has an incentive to make available its depth-of-book data, and not to set such an exorbitant price that few potential buyers of the data would be willing to pay (effectively making it unavailable), the exchange nevertheless can charge prices above competitive levels for those data if the exchange is not constrained by significant competitive forces in their sale and such data have value to customers by reflecting substantial liquidity. Once a seller makes a product available, the price that the seller can charge for the product is a function of whether consumers value the product and whether economically significant substitutes are available.

Furthermore, one would not expect pricing for market data to be constrained by competition for order flow. Order-flow competition implies that traders can and do switch easily among many alternative trading venues. That simply underscores the need for traders to purchase depth-of-book data from all venues with significant liquidity, as they will not know at the time of the data-purchase decision where

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[33] Statement, *supra* note 3, ¶ 67.

liquidity may shift and cannot take the risk that they will miss a significant source of liquidity at favorable volumes and prices.

Consider a small increase in the price of each product. A five percent increase in the monthly subscription fee for depth-of-book data would not have any material effect on the demand for order flow for two reasons. As noted above, the increase in the price of depth-of book data would have no effect on the price of, and therefore the marginal demand for, transactions.

On the other hand, a five percent increase in the price of transactions might well have a material effect on order flow and also on the demand for depth-of-book data. Increasing the price of transactions would reduce the number of orders and would thereby reduce the amount of, and value of, depth-of-book data. In such a case, the willingness of customers to pay for depth-of-book data would decline, especially if those data reflected a significant reduction in liquidity.

An exchange with substantial liquidity therefore maintains significant leverage over the consumers of its depth-of-book data. That dynamic – significant leverage over market data customers and little or no leverage over providers and takers of liquidity – can result in high prices for market data through the exercise of significant market power over unique liquidity data, and low prices for order flow that reflect intense competition and the ability to use revenues from depth-of-book data to subsidize execution costs.

C. The Evidence On Which Ordover And Bamberger Rely Does Not Support Their Conclusion That Nasdaq's "Platform" Proposal Is Constrained By Competitive Forces.

As discussed above, the fees paid for depth-of-book data do not generally vary with the volume of orders placed on an exchange. This is one reason why

competition for order flow does not act as a significant competitive constraint on depth-of-book data prices. Indeed, the only instance of which I am aware where there is a relationship between a firm's use of an exchange for trading and the fees paid for depth-of-book data from that exchange is the current Nasdaq proposal.

As an initial matter, the discount reflected in the Nasdaq market data fees in question here applies only to data fees for non-professional users, so it has no impact on data fees for professional users. Even for fees for non-professional users, a consideration of the economic incentives resulting from the proposed rate schedule demonstrates that it does not provide for a significant competitive constraint of order flow competition on depth-of-book data prices.

Nasdaq's proposal provides for increasingly higher discounts on non-professional depth-of-book data fees and trading fees for firms that place orders above certain specified thresholds on Nasdaq.[34] In particular, for non-professional depth-of-book data fees, under Nasdaq's proposal, greater use of Nasdaq for trading provides for higher discounts on Nasdaq's depth-of-book data fees for non-professional users. While Nasdaq's proposal is on its face a discount on the price of depth-of-book data for non-professional users, in terms of Nasdaq's incentives to attract order flow, the proposed discount scheme would provide an incentive to raise the undiscounted price of Nasdaq's depth-of-book data.[35] A higher depth-of-book

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[34] *See* Proposed Rule Change, *supra* note 29, at 4971.

[35] The Proposal would provide a discount on the current price of Nasdaq's depth-of-book data for non-professional users for those firms that qualified for the applicable discount tiers. If the view expressed by Nasdaq and Ordover and Bamberger that Nasdaq should be free to set its depth-of-book data fees at any level it wishes were accepted, Nasdaq would be able to raise the non-discounted price of its depth-of-book data in the future.

data price means a larger discount for placing more orders on Nasdaq. Higher, rather than lower, undiscounted depth-of-book data prices will provide a greater incentive to place orders on Nasdaq (in terms of the effect of this proposed discount scheme).

This does not therefore mean that the net price of Nasdaq's depth-of-book data for non-professional users would be significantly constrained by the competition for order flow. Nasdaq is simply offering a discount on market data in exchange for the placement of order flow. Nor have Ordover and Bamberger provided any evidence or analysis that competition for order flow would act as a significant competitive constraint on the price of depth-of-book data as a result of the proposed discount scheme.

Ordover and Bamberger also cite Nasdaq's introduction of a cap on the "non-displayed use" of certain Nasdaq depth-of-book data (for use on personal computers and servers for analysis and processing of trading, where the data are not displayed to a user), which they claim was in response to Nasdaq's concern that a member would move order flow from Nasdaq to a competing platform, as evidence of the constraining effect of platform competition on the price of depth-of-book data.[36] As discussed by Ordover and Bamberger, the focus of competition among exchanges in recent years has been for the sale of transaction services rather than competition in the sale of depth-of-book data. Ordover and Bamberger's examples of pricing competition among exchanges are almost exclusively on the prices of transaction

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[36] Statement, *supra* note 3, ¶ 29.

services rather than of depth-of-book data.[37] The only example offered of competition among exchanges in the use of depth-of-book data pricing to compete for order flow is the cap for non-displayed use.

My understanding is that this example does not illustrate competition among exchanges in the pricing of depth-of book data. Rather, in the past, Nasdaq had not attempted to charge for the non-displayed use of depth-of-book data, but had recently become concerned about the possible shift from displayed to non-displayed use of depth-of-book data, such as through an increased use of algorithmic trading rather than human traders. Instead of illustrating an attempt to compete on depth-of-book data prices, this example illustrates an attempt to restructure its depth-of-book data fees and, possibly, to increase prices to broker-dealers.[38]

V. PRICES FOR DEPTH-OF-BOOK DATA ARE NOT SIGNIFICANTLY CONSTRAINED BY INTER-PLATFORM COMPETITION.

Ordover and Bamberger argue that inter-platform competition acts as a significant competitive constraint on the pricing of depth-of-book data. Ordover and Bamberger focus on the "total return" or "aggregate return" that a platform receives from trade execution services and depth-of-book and other market data.[39] They

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[37] Statement, *supra* note 3, ¶¶ 23-25. Ordover and Bamberger make reference to what they claim is competition with Nasdaq in the pricing of its "Last Sale" data used for display on web sites. The Last Sale data report the last sale price of different securities and are not depth-of-book data. Even if Ordover and Bamberger's claim were correct with respect to Last Sale data, it would not indicate that there is competition for the pricing of Nasdaq's depth-of-book data. There is no reason to expect that the competitive conditions for Last Sale data displayed for informational purposes on public web sites would be indicative of those for depth-of-book data used by traders for evaluating and placing large orders.

[38] As I have noted in my prior reports, the fact that exchanges with significant depth-of-book liquidity do not face significant competitive constraints on pricing of depth-of-book data does not mean that they can increase prices indefinitely without facing customer resistance. *See* Evans Second NYSE Arca Report, *supra* note 12, at 14-15.

[39] Statement, *supra* note 3, ¶¶ 5, 19, 28.

claim that the "total price of trading" on a platform – including the price of execution and the price of data – is constrained by the total price of trading on alternative platforms.[40] Based on that hypothesis, Ordover and Bamberger contend that Nasdaq should be free to set depth-of-book data prices at whatever high price it chooses because "an 'excessive' price" for market data would result "in lower prices for other products sold by the firm."[41]

Ordover and Bamberger's claim is therefore not that the price of *depth-of-book data* will be constrained by platform competition, but rather, that an elevated price for depth-of-book data will be offset by a lower price for trade execution. Even if that were true, it is irrelevant to the statutory standard for exchange fees. The relevant standard suggested by the SEC is whether the *price of depth-of-book data* is significantly constrained by competitive forces, not whether an elevated data price for all customers is offset by lower trade execution prices (for some customers). Indeed, in the *NetCoalition* decision, the D.C. Circuit identified "the costs of collecting and distributing market data" as the relevant costs to consider in the competitive analysis, not the total costs of the trading venue or whether there were countervailing effects on the price of trading services.[42] The allocation of the total costs of the trading venue simply does not address the fundamental proposition of whether competition for trading services constrains the price of market data.

Ordover and Bamberger's economic argument is also fundamentally flawed. Even if one assumes that depth-of-book data prices are a component of the "total

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[40] Statement, *supra* note 3, ¶ 38.
[41] Statement, *supra* note 3, ¶ 21.
[42] *NetCoalition*, 615 F.3d at 537.

price of trading," that component does not affect the marginal incentives of a broker-dealer to execute a trade, as discussed in the previous section. On the other hand, transaction fees can and do affect order flow decisions and thus the generation of valuable depth-of-book data. Thus, while inter-platform competition for trading may constrain the prices of trade execution services, it does not significantly constrain depth-of-book data fees. As noted above, that inter-platform competition could result in high depth-of-book data fees cross-subsidizing low trade execution fees.

Ordover and Bamberger further attempt to advance their "total return" argument by characterizing trade execution services and market data as "joint products" with "joint costs" and by asserting that trading platform competition will necessarily constrain the total return from those joint products.[43] Where two "joint products" of the same facility are sold as separate products and in separate proportions, if there is market power in one of the products, the price of that product will not be competitively constrained by "platform competition."

A classic example of joint products with joint costs is the production of wool and mutton, to which Ordover and Bamberger and Nasdaq refer numerous times. Wool and mutton are joint products of a sheep, and many of the costs of producing both products (*i.e.*, the care, feeding, and handling of the sheep) are the same. However, the demand conditions for wool are independent of those for mutton. There is no relationship between the final demand for wearing sweaters and that for eating lamb chops.

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[43] Statement, *supra* note 3, ¶ 5 ("Competition among trading platforms can be expected to constrain the aggregate return each platform earns from its sale of the array of its products, including the joint products at issue here, which are execution services and proprietary data. . . .").

Suppose, for example, that market conditions are such that only one firm can produce desirable wool (because its sheep have much better wool than its competitors' sheep), while many firms can produce desirable mutton (if we assume the mutton from all sheep is perfectly substitutable). Under those conditions, the competition to produce mutton, however intense it might be, will not significantly constrain the monopoly wool producer's pricing of wool. If other firms cannot produce wool of satisfactory quality, the monopoly wool producer will face no competition in the pricing of wool, even as the pricing of mutton faces intense competition. Our point here is that the existence of joint costs for joint products does not ensure a particular competitive outcome in either product market.

Ordover and Bamberger appear to agree with this elementary point, but argue that "competitive concerns" are "not present here because, as we have seen, other exchanges have been able to enter, flourish, and divert business from NASDAQ."[44] But Ordover and Bamberger do not provide any basis for their assertion that there is no reason for concern over Nasdaq's *depth-of-book data* pricing because other platforms are able to compete for *order flow*. And, in fact, intense competition among trading platforms could result in all of them choosing to adopt high prices for depth-of-book data and low prices for transaction services. That would not be consistent with the objectives of the Exchange Act.

Moreover, as Ordover and Bamberger acknowledge, "all else equal, the deeper is the 'depth-of-book' information on an exchange, the more valuable it is."[45]

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[44] Statement, *supra* note 3 ¶ 41.
[45] Statement, *supra* note 3, ¶ 16.

As I discussed in Section II above, there are significant differences in the volume of trading across exchanges and the value of the depth-of-book data on different exchanges. Such an outcome is compatible with significant competition for order flow among exchanges.

Indeed, when new trading platforms such as BATS and Direct Edge entered, they started with no trading volume and no market data of value. This substantial disadvantage with respect to depth-of-book data relative to NYSE and Nasdaq did not prevent BATS and Direct Edge from competing for order flow. That is, there is no basis for Ordover and Bamberger's claim that market power in depth-of-book data would necessarily be reflected in significantly diminished competition for order flow.

As I have explained, in the case of trading venues, competition for order flow does not significantly constrain depth-of-book data pricing even if they are viewed as joint products. Regardless of competitive conditions for trade execution, an exchange can charge supracompetitive prices for depth-of-book data if the exchange does not face significant competitive constraints in the sale of such data and such data have value by reflecting substantial liquidity. As demonstrated in Sections III and IV above, that is the case here.[46]

Finally, even if Ordover and Bamberger's "total products" theory were correct, consumers that purchase little or no trade execution services from Nasdaq would pay elevated prices for depth-of-book data with little or no offset from lower

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[46] *See also* Evans First NYSE Arca Report, supra note 12.

trade execution prices. The prices paid by those customers would not be constrained by significant competitive forces.

VI. CONCLUSION

The fundamental problem with Ordover and Bamberger's argument is that it is simply not relevant to the matter before the SEC. Their basic argument is that competition between exchanges results in the elimination of profit and makes their ***total*** prices track their ***total*** costs. If exchanges charge high prices for depth-of-book data, they would charge low prices for order flow or something else. Whether that is true or not—and Ordover and Bamberger provide no evidence that it is—it is irrelevant to the question before the SEC. An outcome in which "platform" competition results in high-priced data that is used to subsidize order flow does not show that those data prices are fair and reasonable.

Nothing about sheep, mutton and wool salvages the flaw in this argument. The sheep market happens to be intensely competitive in mutton and wool. But that does not mean that all businesses based on joint products are competitive in both. As noted above, if only a handful of farmers had good wool for sweaters, those farmers could have market power in wool even though they were selling mutton on a competitive market.

The fact is that exchanges, which are the subject of this proceeding, are quite different from sheep. Only Nasdaq can supply the depth-of-book data that traders need for assessing whether they should trade on Nasdaq and elsewhere. Nasdaq has incentives to charge high prices for those data and in fact to use the revenue from that data to subsidize order flow. Nasdaq's depth-of-book data prices are not constrained by competitive forces and nothing that Ordover and Bamberger say changes that fact.